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ABSTRACT

An exception to most observational studies examining sex differences is Ladd's (1983) study of popular, average, and rejected children, which reported sex differences within as well as across groups. Like Ladd's research, the present study looks at sex differences within and across subsamples of boys and girls, comparing the playground behavior of peer-identified aggressive, withdrawn, aggressive-withdrawn, and contrast group children. Special attention is given to sex differences within the aggressive-withdrawn group since it is hypothesized that this group may resemble Ladd's rejected group. Subjects were 117 students from grades 4 through 6 at two French-speaking elementary schools in Montreal, Canada. After group assignments were determined by scores on the Pupil Evaluation Inventory, each subject's playground behavior was videotaped. Tapes were scored by observers using a specially developed code focusing on extent of sociality in play, sex of peer with whom interactions took place, frequencies of aggressive/mock aggressive acts, and motor level. Some expected sex differences were found across groups. Contrary to expectations, boys did not spend more time than girls in a group of peers, nor did they spend significantly more time in play. Predictions regarding sex differences within groups were not supported. Unexpectedly, sex difference in aggression was more than twice as prominent among contrast group subjects than among aggressive children. (RH)

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SEX DIFFERENCES IN AGGRESSIVE AND WITHDRAWN BEHAVIOR ON THE PLAYGROUND

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Over the years, many researchers have examined sex differences in children's behavior. Among the most frequently reported differences have been sex differences in aggression, play style, and activity level. Boys have been reported to be more aggressive than girls (Eme, 1979; Hartup, 1974; Ladd, 1983; Maccoby, in press; Williams, Joy, Kimball, & Zabrack, 1983) and peers have been found to be more likely to retaliate boys' aggression than girls' (Benn & Garbarino, 1981; Fagot, in press). Boys have been reported to spend more time in a group (Ladd, 1983; Maccoby, in press) and to spend more time in social play (Ladd, 1983), whereas girls spend more time engaged in conversation (Ladd, 1983). Boys have also been found to be more active than girls (Block, 1976; Eme, 1979).

Most of the observational studies that have examined sex differences have compared all boys sampled with all girls sampled, without examining differences between subsamples of each sex. Ladd's (1983) study is therefore particularly interesting because in his study of Popular, Average, and Rejected children, he reported sex differences that he found within as well as across the three groups. While boys in all three groups were found to have been involved in more rough and tumble play than girls, the sex difference was largest among the Rejected children. Similarly, while boys in general spent more time with opposite sex peers, the difference was especially prominent within the Rejected group. Contrary to the general tendency for boys to spend time with a larger group of peers, Rejected boys did not spend significantly more time with a large group than did Rejected girls.

The present study, like Ladd's, looks at sex differences within and across subsamples of boys and girls. The playground behavior of peer-identified Aggressive, Withdrawn, Aggressive-withdrawn, and Contrast children is compared. Special attention is paid to sex differences within the Aggressive-withdrawn group, since it is hypothesized that this group may resemble Ladd's (1983) Rejected group.

Paper presented at the annual meeting of the American Psychological Association, Toronto, Ontario, August 1984.

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METHOD

Based on peer nominations collected using the Pupil Evaluation Inventory (Pekarik, Prinz, Liebert, Weintraub, and Neale, 1976), four groups of children were selected from among the grade 4-6 populations at two French elementary schools in Montreal. Children whose scores were within the top 10% for their sex and class on the PEI Aggression scale and who scored low on the PEI Withdrawal scale composed the Aggressive group (n=29). Children who scored within the top 10% on Withdrawal and low on Aggression constituted the Withdrawn group (n=27). The Aggressive-withdrawn group was made up of children whose scores were within the top 30% on both scales (n=28). Contrast children were selected from among those children who scored near the mean for their sex and class on both scales (n=33).

Each target subject's playground behavior was videotaped several times throughout the school year. Filming was done from a second story window overlooking the playground. Between 6 and 12 minutes of codable data, in 2-minute segments, were collected per child at School 1. At School 2, 24 to 32 minutes of data were obtained for each subject.

The videotapes were scored by trained observers using an observational code developed for this study. Durations of time spent in play vs. merely proximal to a peer vs. alone were coded and the sex of the peers interacted with was recorded. Frequencies of various forms of aggression/play-fighting (punch, slap, and other) were counted. Motor level was coded on a 3-point rating scale.

Both group and sex differences were analyzed. Group differences are reported elsewhere (Lyons, Serbin, & Marchessault, 1984).

RESULTS

Across groups

One-tailed tests were used to compare boys' and girls' behavior. As expected, boys were found to aggress more frequently than girls. This was true across the three types of aggression/play-fighting coded. Overall, boys initiated aggression an average of 2.0 times per minute (SD = 1.0) in comparison to girls' 0.8 times per minute (SD = 0.4). The difference was smallest for slaps, $t(64) = 2.33$, $p<.02$, and larger for punches, $t(66) = 4.40$, $p<.001$, and for other forms of aggression, $t(96) = 5.06$, $p<.001$.

Intuitively, it had been expected that punches would account for a larger percentage of boys' aggression than girls'. This was found to be true. Whereas less than 1% of girls' aggression took the form of punches, punches constituted 4% of boys' aggression, $t(73) = 3.84$, $p<.001$. It had also been hypothesized that slaps would be more characteristic of girls than boys, but

this was not supported. Slaps accounted for 6% of boys' aggression and for 4% of girls' aggression.

Also contrary to expectation, peers did not retaliate a significantly greater percentage of boys' aggression. Twenty-eight percent of girls' aggression and 29% of boys' aggression led to retaliations by peers.

Boys had been hypothesized to spend more time playing with peers, but the 58% of boys' time spent in social play was not significantly greater than the 55% of girls' time so spent. Also contrary to expectation, boys did not spend more time with a group. Girls spent 73% of their time in a group, in comparison to boys' 70%. The amount of time boys spent with the opposite sex (33%) was also not significantly greater than the 30% of girls' time so spent.

Data regarding time spent proximal to but not playing with peers did conform to expectation. Girls were found to spend significantly more time near peers without playing. One third of girls' time was so spent, in comparison to 28% of boys' time, $t(115) = 1.66$, $p<.05$.

As expected, boys were found to be more physically active than girls, $t(105) = 3.63$, $p<.001$.

Within groups

Ladd's (1983) data showed a unique pattern of sex differences among Rejected children. It was hypothesized that the Aggressive-withdrawn children in the present study might show a similar pattern, but this was not supported. The sex difference in aggression was not found to be especially prominent among Aggressive-withdrawn children. Aggressive-withdrawn boys showed 2.1 times as much aggression as Aggressive-withdrawn girls. The sex difference was less prominent among Aggressive children (Aggressive boys aggressed 1.6 times as frequently as Aggressive girls), but more prominent among Withdrawn and Contrast children. Withdrawn boys aggressed 2.8 times as frequently as Withdrawn girls, and Contrast boys aggressed 3.6 times as frequently as Contrast girls.

Aggressive-withdrawn boys did not spend less time with a group of peers, contrary to expectation. Actually, Aggressive-withdrawn boys spent nonsignificantly more time with a group than did other boys (AW = 74.5% vs. W = 62.3%, A = 73.5%, C = 71.8%).

Ladd's Rejected boys had been found to spend an especially high percentage of their time with opposite sex peers. Aggressive-withdrawn boys in the present study spent 40% of their time with opposite-sex peers (including time in a mixed group), but this was not significantly greater than the 30% to 32% of time recorded for the other three groups.

DISCUSSION

Some interesting sex differences were found across groups. Boys showed more physical aggression than girls and were more physically active, as was expected based on the literature (Block, 1976; Eme, 1979; Hartup, 1974; Maccoby & Jacklin, 1980; Williams et al., 1983). Girls spent more time with peers outside of the context of a game than boys did, as Ladd (1983) had found. However, contrary to expectation, boys neither spent more time than girls in a group of peers, nor did they spend significantly more time in play (cf. Ladd, 1983; Maccoby, in press). This failure to detect differences in play and group interactions may be a function of the situation in which the present data were collected. It was the norm for both sexes to spend much of their recess time in group games. This behavior was encouraged by the teachers monitoring the playground and by the type and limited quantity of play equipment the school provided. Under less structured conditions with more options available to them, boys and girls may spend their time differently.

Predictions regarding sex differences within the four groups were not supported. Sex differences within the Aggressive-withdrawn group in the present study generally did not resemble the pattern Ladd (1983) found among Rejected children.

One unexpected finding in the present study was the fact that the sex difference in aggression was more than twice as prominent among Contrast subjects as among Aggressive children. This appears to contradict Maccoby and Jacklin's (1980) speculation that sex differences in aggression are probably due to the existence of more extremely aggressive boys than extremely aggressive girls. Maccoby and Jacklin suggested that the typical boy is not necessarily more aggressive than the typical girl. However, the present results show the sex difference to be greater among the "typical" Contrast subjects than within the group identified as being extremely aggressive. Maccoby and Jacklin acknowledged that this issue has yet to be fully explored experimentally. It appears to be an area that merits further research.

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